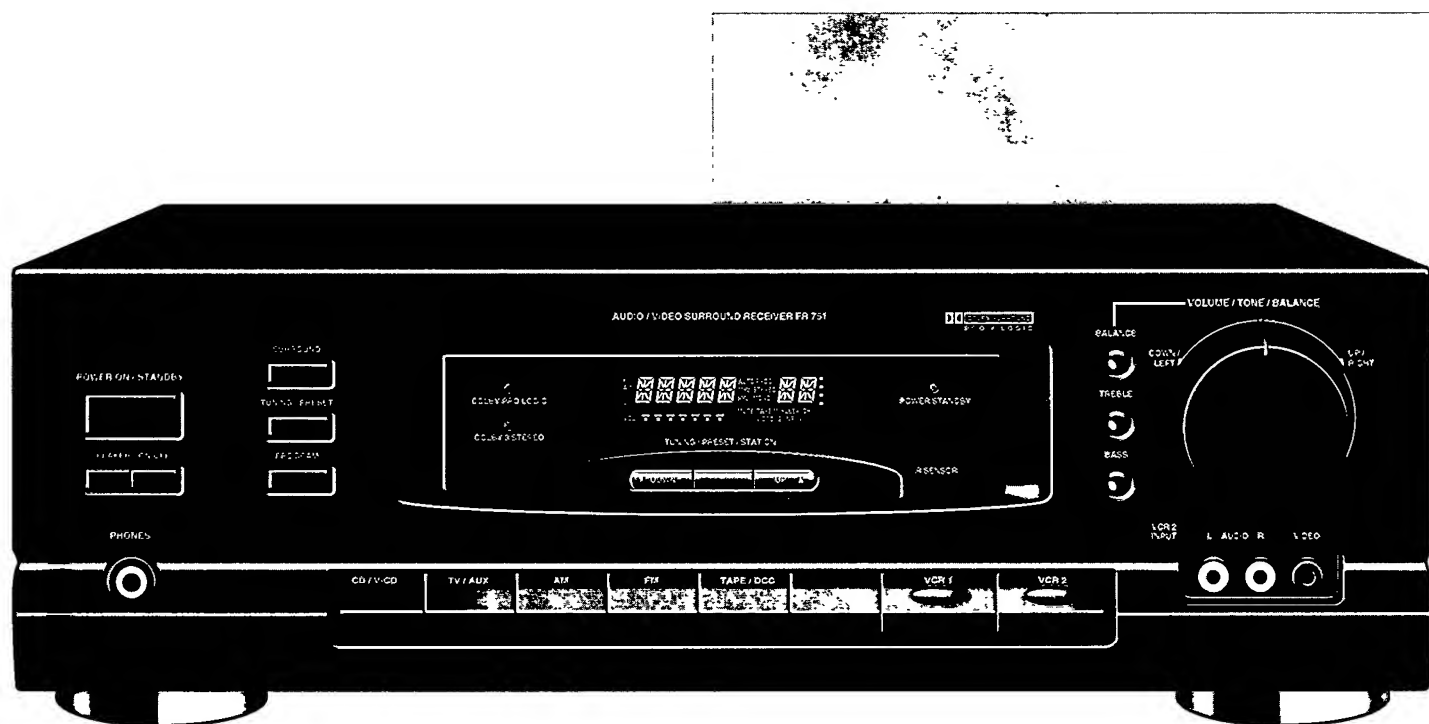


PHILIPS

FR 731 Dolby Prologic AV Receiver



Instructions for use
 Mode d'emploi
 Instrucciones de manejo
 Bedienungsanleitung
 Gebruiksaanwijzing
 Istruzioni per l'uso
 Manual de utilização
 Brugsanvisning
 Bruksanvisning
 Käyttöohje
 Οδηγίες χρήσεως



PHILIPS

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(E) España

Declaración de conformidad con normas

El que suscribe, en nombre y representación de:
Business Unit Audio Systems
Philips China Hong Kong Group Company Ltd.

declara, bajo su propia responsabilidad, que el

equipo: **Receptor**
fabricado por: **BUAS Hong Kong**
en: **Far East**
marca: **Philips**
modelo: **FR 731**

objeto de esta declaración, cumple con la normativa siguiente:
Reglamento sobre Perturbaciones Radioeléctricas,
Real Decreto 138/1989, Anexo V.

Hecho en: **Hong Kong, 01-08-1995**

Firma:

Nombre: **C.S. Lau**
Cargo: **Quality Manager**

(MEX) México

NOM

Es necesario que lea cuidadosamente su instructivo de manejo.



NOM

Garantíapágina 125

(BR) Brasil

Garantíapágina 125

(AUS) Australia

Guarantee.....page 124

(NZ) New Zealand

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(N) Norge

Typeskilt finnes på apparatens bagsiden.

Observer

Nettbryteren POWER er sekundert innkoplet. Den innebygde nettdelen er derfor ikke frakoplet nettet så lenge apparatet er tilsluttet nettkontakten.

Thank you for selecting the Philips FR 731 Stereo Receiver.

A part of the state-of-the-art Philips 700 series, the FR 731 receiver is engineered to fulfil the task of generating powerful sound with the highest achievable definition, minimum noise and distortion. The FR 731 is supported by features such as:

- A full-function remote control which can handle your entire PHILIPS 700 series HiFi system, as well as a TV set and a video cassette recorder.
- RC-5 BUS, offering increased ease of operation by extensive communication between the various components of your system.
- High-precision, drift free quartz-locked digital tuning on two wavebands.
- 30 frequencies can be stored in the memory.

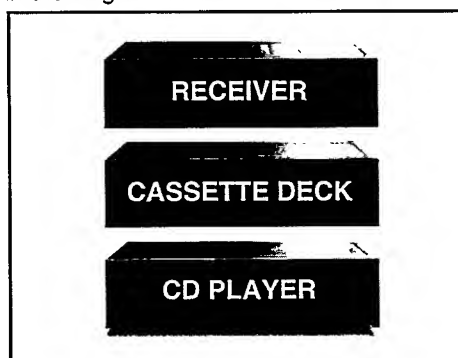
Please read this manual carefully **before** you attempt to connect or operate the receiver.

This manual is divided into seven sections:

- **Installation:** explains how to set up your system - pages 3, 4 and 5.
- **Functional overview:** explains how to use the major controls - pages 6, 7 and 8.
- **Amplifier:** gives more detailed information on operation of the amplifier section of your receiver - pages 9 and 10.
- **Tuner:** gives more detailed information on operation of the tuner section of your receiver - page 11.
- **Other options:** explains the sleep-timer function and the VCR dubbing mode - page 12.
- **Additional information:** includes maintenance information and technical data - page 12.
- **Troubleshooting:** gives information on possible causes of problems and how to solve them - page 13.

POSITIONING YOUR SYSTEM

The preferred order to stack the units of your system is shown in the diagram below.



WARNING

Do not connect the set to the mains until all other connections have been made and the mains voltage (indicated on the type plate on the back cover) has been checked.

When positioning the unit, bear in mind that every receiver produces heat which must be able to dissipate freely. For this reason, do not cover any vents and make sure that there is sufficient ventilation around the unit.

AC POWER SUPPLY

- Check that the mains voltage as shown on the type plate corresponds to your local mains supply. If it does not, consult your dealer or a Philips Authorized Service Centre.
- Insert the plug of the mains lead into the wall socket.
- The power supply is now connected.
- To disconnect the set from the mains completely, remove the mains plug from the wall socket.

The type plate is located on the back of the set.

This product complies with the radio interference requirements of the European Community.

Important notes for users in the U.K.:

Mains plug

This apparatus is fitted with an approved 13 Amp plug. To change a fuse in this type of plug proceed as follows:

- 1 Remove fuse cover and fuse.
- 2 Fix new fuse which should be a BS1362 5 AMP, A.S.T.A. or BSI approved type.
- 3 Refit the fuse cover

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5 A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 A.

Note: The severed plug must be disposed to avoid a possible shock hazard should it be inserted into a 13 A socket elsewhere.

How to connect a plug

The wires in the mains lead are coloured in accordance with the following code: blue = neutral (N), brown = live (L). As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

- 1 Connect the blue wire to the terminal marked N or coloured blue or black.
- 2 Connect the brown wire to the terminal marked L or coloured brown or red.
- 3 Do not connect either wire to the earth terminal in the plug, marked E or \perp or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the two wires

If in doubt, consult a qualified electrician.

INSTALLATION

English

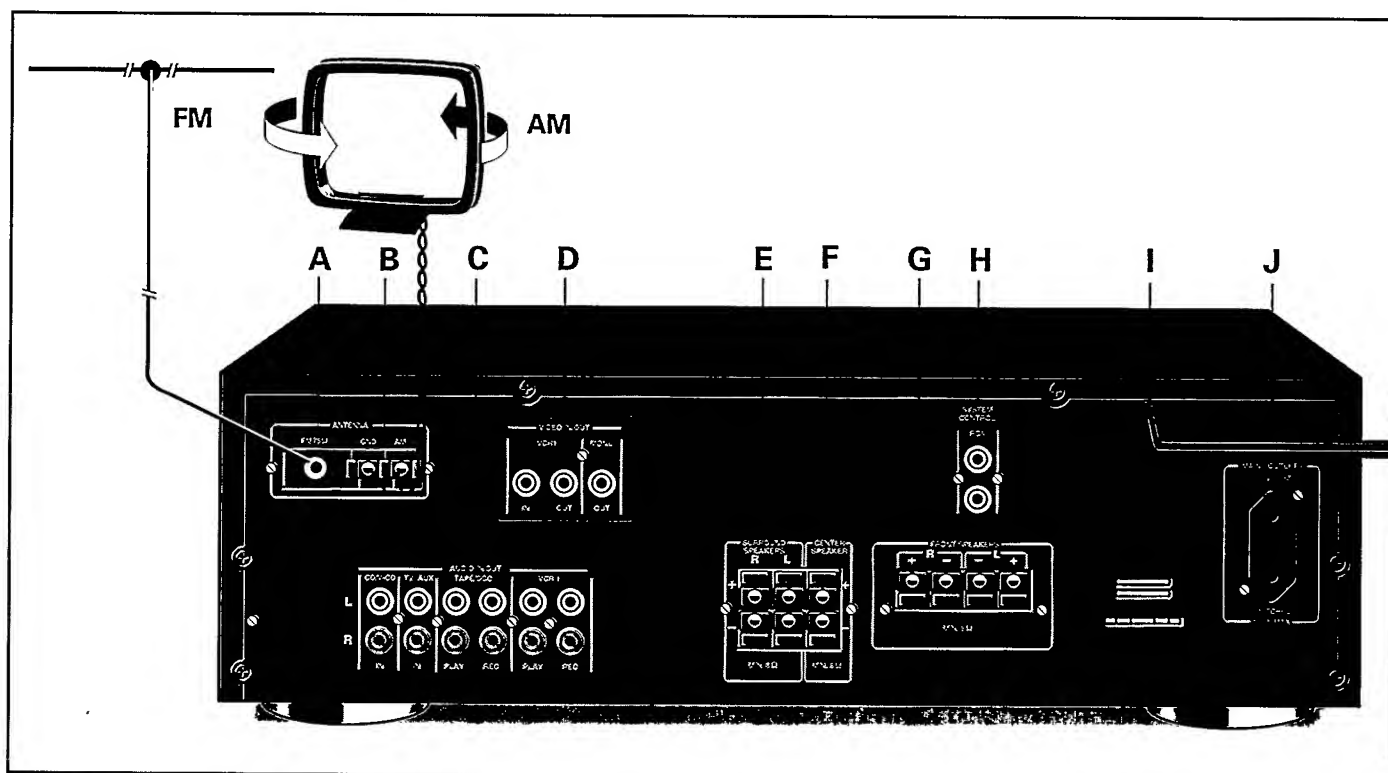
You only have to install your system once.
Please make the following connections (where applicable).

NOTES!

- **SWITCH OFF THE RECEIVER BEFORE MAKING ANY CONNECTIONS.**
- Do not connect the set to the mains when making connections.
- Be sure to connect the white plugs to the L (left) and the red plugs to the R (right) sockets when making connections.

Important note for connecting equipment that does not have PLAY/REC markings on the input and output sockets:

FR731	Device to be connected e.g. cassette deck.
PLAY →	PLAY or OUT
REC →	REC or IN



CONNECTIONS

A FM (75 Ω)

The FM (75 Ω) socket is used for connection to the Community or Cable Antenna System or to a roof-mounted FM antenna with an impedance of 75 ohms. If none of these are available, you may use the supplied wire for nearby stations (reception could be poor).

B GND/AM

For AM reception, connect the supplied wires to the GND and AM antenna terminals (one wire to GND and one wire to the AM terminal) and position the antenna for best reception.

Note: Do **not** place the AM loop antenna on the unit, as this unit employs a computing device which could cause interference.

C AUDIO IN/OUT

- **CD/V-CD IN** – input sockets for connecting a Compact Disc player or a Video CD player.
 - Connect these sockets to the OUTPUT sockets of the (V-) CD player.
- **TV/AUX IN** – input sockets for connecting the sound channel of a TV set or any other source you want to hear; an additional CD player, a cassette deck, a VCR or a turntable with ceramic cartridge, etc.
- **TAPE/DCC PLAY/REC** – input and output sockets for connecting a cassette deck, a Digital Compact Cassette deck or another digital recording device.
 - Connect the PLAY sockets to the LINE OUTPUT sockets of the deck.

These sockets may also be connected to the LINE OUTPUT sockets of an audio processor such as an optional graphic equalizer or a Digital Signal Processor.

- Connect the REC sockets to the LINE INPUT sockets of the deck.

These sockets may also be connected to the LINE INPUT sockets of an audio processor such as an optional graphic equalizer or a Digital Signal Processor.

- **VCR 1 PLAY/REC** – input sockets for connecting the sound channel of a video recorder and output sockets for extra sound recording equipment (e.g. a HiFi stereo video recorder, or cassette or tape deck).
 - Connect the PLAY sockets to the OUTPUT sockets of the VCR.
 - Connect the REC sockets to the INPUT sockets of the VCR.

D VIDEO IN/OUT

- **VCR 1 IN/OUT** – input and output sockets for connecting the video input and output of a video recorder
- **MONI/OUT** – output socket for connecting to the video input of a video TV set.

E SURROUND SPEAKERS

Terminals for connecting a pair of surround speakers, impedance of 8 Ω each, to obtain a surround sound effect.
NOTE: Always connect **two** speakers to these terminals.

F CENTER SPEAKER

Terminals for connecting a center speaker.

INSTALLATION

G FRONT SPEAKERS

Terminals for connecting a pair of speakers, impedance 6-16 ohms (L = left, R = right).

- One of the wires of a loudspeaker cable is marked with a colour or rib. Connect the marked wire to the red terminal, the non-marked wire to the black one.

H SYSTEM CONTROL

RC-5 (coloured orange) – remote-control input/output sockets for connection to the corresponding RC-5 sockets of a CD (Compact Disc) player or a remote control receiver. Connect the RC-5 sockets to the RC-5 sockets of the external equipment that uses the RC-5 remote control system.

These sockets have been added to maintain compatibility with other Philips Audio equipment.

POWER

I MAINS LEAD

For connecting the set to the mains.

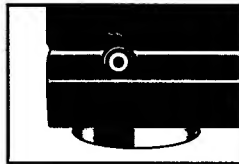
J MAINS OUTLETS

Switched mains output for connecting mains plugs from various units such as cassette deck, CD player, etc. (maximum capacity is 100 W).

Power supplied through this outlet is turned on and off by the POWER button of the receiver.

CONNECTING HEADPHONES

- Connect headphones with a 6,3 mm jack plug to the PHONES socket.
- Inserting the plug will not disconnect the loudspeakers.



SPEAKER POSITIONING

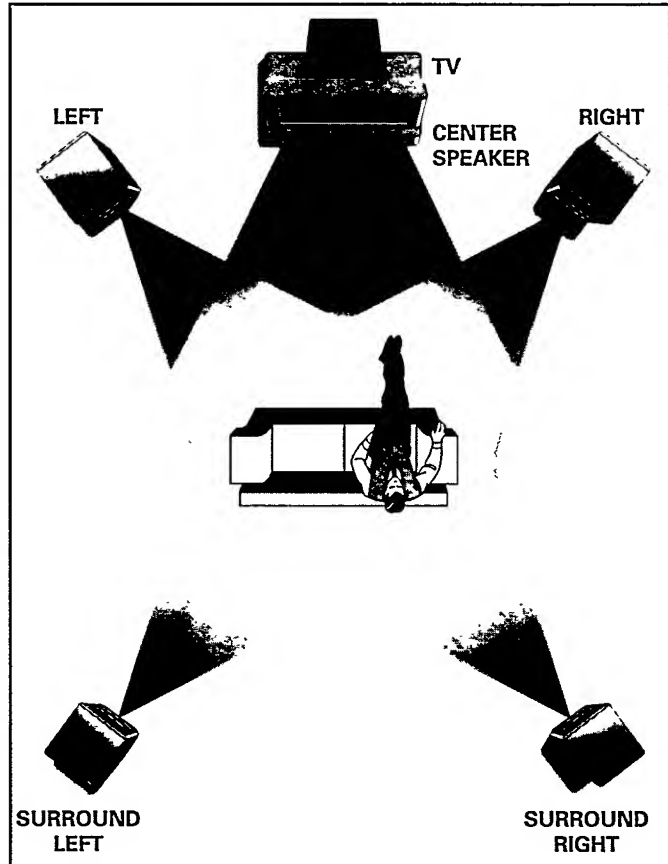
To obtain the best surround sound effect in your home, place the speakers as shown below.

The left and right speakers should be about 1 m (40") from the TV set.

The center speaker should be above or below the TV set.

The rear speakers should be placed at normal listening ear level.

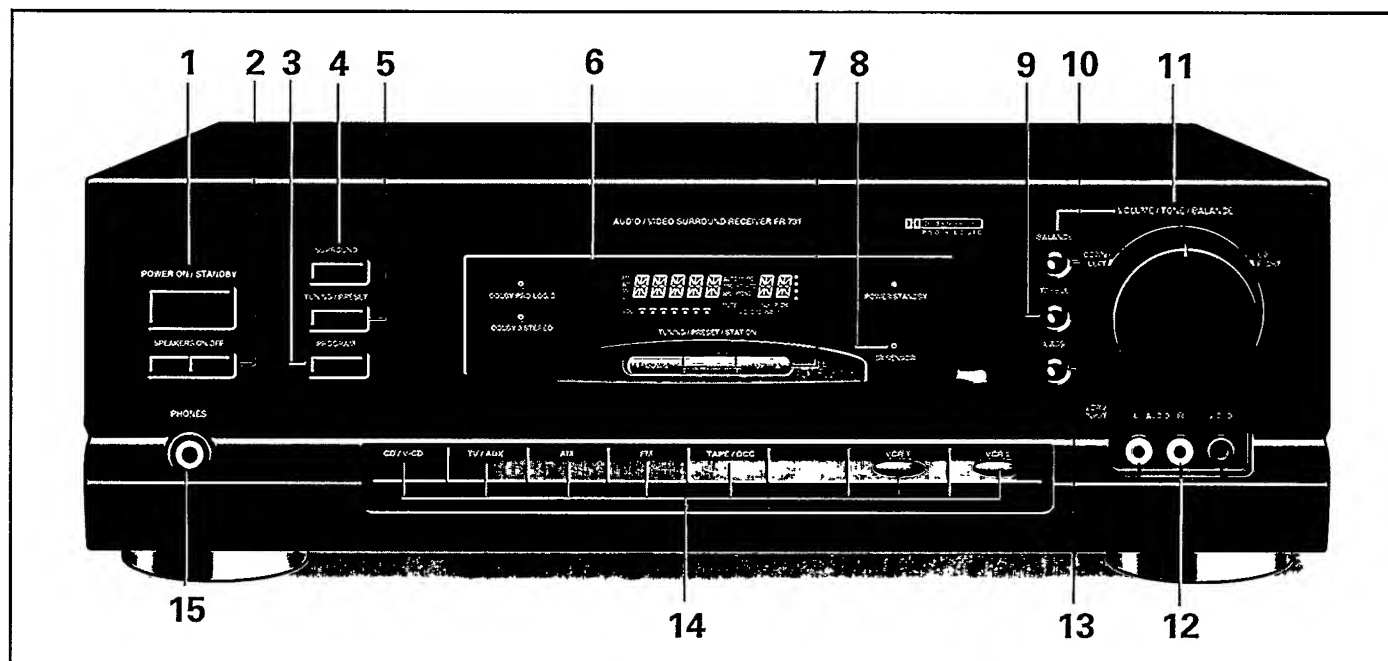
Note: to avoid interference with the TV picture, use only magnetically shielded speaker systems.



After making all necessary connections (some may not apply to your system set-up), your system is ready for use. In the next chapter, we will describe how to operate your FR 731 receiver.

FUNCTIONAL OVERVIEW

English



FRONT

1 POWER ON/STANDBY

For switching on to standby mode and for switching off.

2 SPEAKERS ON/OFF

For switching the speakers connected to the FRONT SPEAKERS terminals on and off.


3 PROGRAM

For storing preset stations.

4 SURROUND

For selecting the surround modes:

DOLBY PRO LOGIC, DOLBY 3-STEREO, OFF.

Dolby Surround manufactured under license from Dolby Laboratories Licensing Corporation. 'Dolby' and the double D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

5 TUNING/PRESET

For selecting the frequency or channel mode.

6 DISPLAY

Informs you about the functioning of the receiver.

7 TUNING/PRESET/STATION UP/DOWN

- For adjusting the station frequency.
- For selecting the next or previous tuner preset.

8 I(nfra) R(ed) SENSOR

Infrared remote control eye for receiving signals from the remote control.

9 TREBLE

For adjusting the high tones (use together with the VOLUME/TONE/BALANCE control 11).

10 BALANCE

For adjusting the balance of the volume between the left and right channels (use together with the VOLUME/TONE/BALANCE control 11).

11 VOLUME/TONE/BALANCE

- **VOLUME** – For adjusting the volume.
- **TONE** – For adjusting the high tones and the bass tones (use together with the TREBLE 9 and BASS 13 controls).
- **BALANCE** – For adjusting the balance of the volume between the left and right channels (use together with BALANCE button 10).

12 VCR 2 AUDIO/VIDEO INPUT

Connections for an extra VCR or camcorder (VIDEO) or an extra audio source (AUDIO): CD player, Video CD player, cassette deck or DCC deck.

13 BASS

For adjusting the bass tones (use together with the VOLUME/TONE/BALANCE control 11).

14 SOURCE SELECTION KEYS

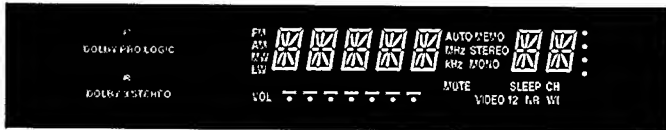
For selecting the required audio or video source.

15 PHONES

For connecting headphones.

FUNCTIONAL OVERVIEW

DISPLAY



DOLBY PRO LOGIC, DOLBY 3-STEREO

Indicates the selected surround mode.

FM, AM

Indicates the selected waveband. The frequency of the tuned station is indicated in **MHz** (for FM) or in **kHz** (for AM).

000000

Indicates the station frequency.

VOL

Show volume, bass, treble and balance settings.

AUTO

Lights up when operating auto tuning or auto presetting.

MUTE

Lights up when the MUTE button on the remote control is pressed.

MEMO

Flashes when the memory has been opened to store a preferred station.

STEREO

Lights up when an FM stereo transmission is received.

MONO

Lights up when the MONO/ST(ereo) button on the remote control has been pressed to receive a mono signal.

VIDEO 1/VIDEO 2

Lights up when the corresponding source is selected.

00

Indicates the selected channel number, sleep time (in minutes), bass or treble level.

SLEEP

Lights up when the sleep timer is active.

CH(annel)

Shows the selected channel.

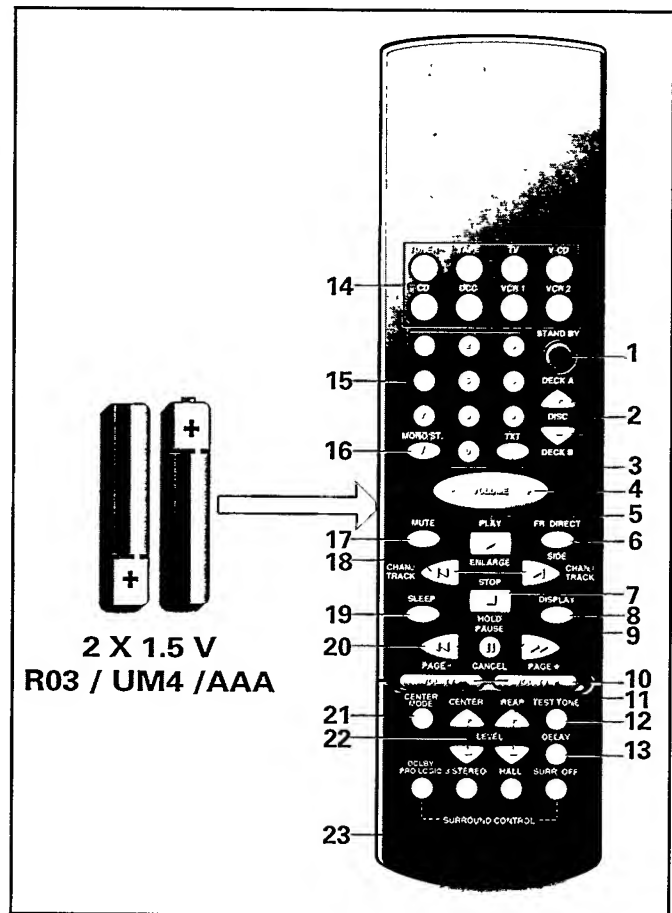
NR(normal), **WI**(wide band), **PH**(phantom)

Indicates the selected center mode in Dolby Pro Logic or Dolby 3-Stereo mode.

TEST

Lights up when Test Tone mode is activated.

REMOTE CONTROL



The remote control (supplied) can be used to operate all units in the system. In addition, it can be used to operate any other equipment that uses the RC-5 remote control system.

BATTERIES

- Open the battery compartment and insert two batteries as indicated, type R03, UM-4 or AAA-cells.
- Remove the batteries when they have run down or if the remote control will not be used again for a long period.

Note – Do not use rechargeable batteries.

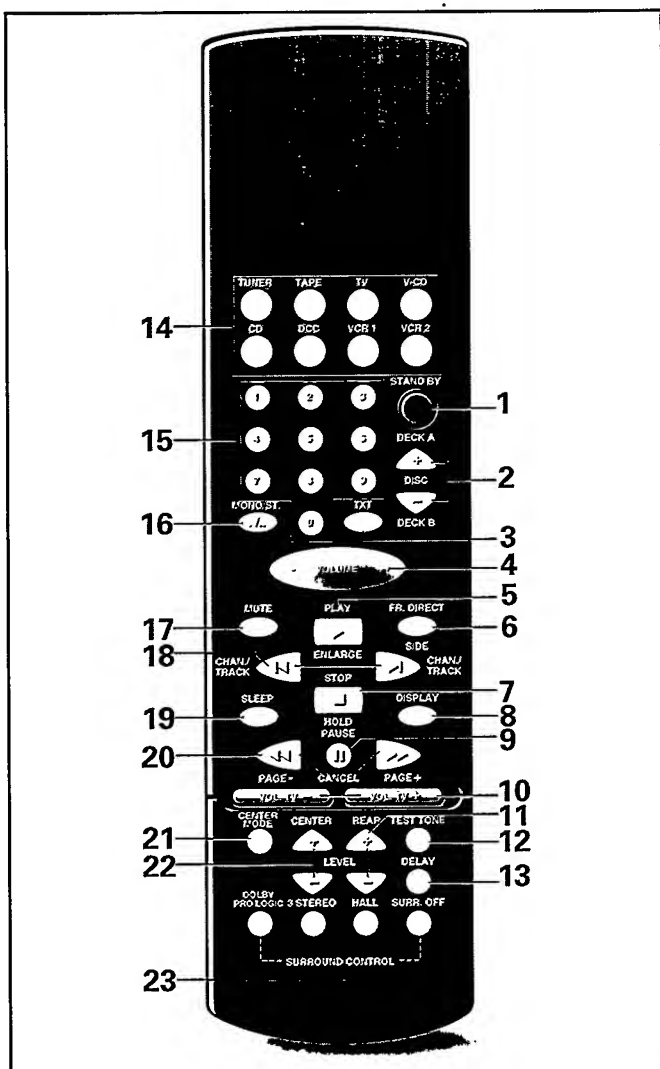
USING THE REMOTE CONTROL

- First select the source you wish to control by pressing one of the eight source select keys on the remote control (e.g. TAPE, CD, etc.).
- Then, select the desired function.

English

FUNCTIONAL OVERVIEW

English



AMPLIFIER

- 1 STANDBY** – for switching the complete system to standby (by pressing for longer than approx. 1 second).
- 4 – VOLUME +** – for adjusting the volume.
- 14 Source selectors**
- 17 MUTE** – for decreasing the volume by 20 dB.
- 19 SLEEP** – for setting a time period after which the system will automatically be switched to standby.

Surround processor

- 11 REAR LEVEL +/-** – for adjusting the rear level (only in Dolby Pro Logic mode).
- 12 TEST TONE** – for checking the output level of the front, center and rear speakers.
- 13 DELAY** – for adjusting the delay time of the rear channel (has no influence on the FR731 for the delay time is fixed).
- 21 CENTER MODE** – for selecting the desired center mode when in Dolby Pro Logic or Dolby 3-Stereo mode.
- 22 CENTER LEVEL +/-** – for adjusting the center level (only in normal mode or wide mode).
- 23 SURROUND CONTROL**
 - **PRO LOGIC, 3-STEREO** – for selecting the different surround modes (the HALL button has no influence on the FR731).
 - **SURR(ound) OFF** – for switching the surround mode off.

TUNER

- 1 STANDBY** – for switching the complete system to standby.
- 6 FR(equency) DIRECT** – for direct tuning to the station frequency.
- 150-9 digit keys** – for selecting stations in frequency direct mode.
- 16 MONO/ST** – for mono/stereo selection.
- 18 CHANNEL/TRACK** – next ► or previous ◄ preset station.
- 20 ◀◀ ▶▶** – for tuning up and down.

TAPE

- 1 STANDBY** – for switching the complete system to standby.
- 2 DECK A/DECK B** – for selecting deck A or B.
- 5 PLAY ►** – for starting play.
- 6 SIDE** – for selecting tape side A or B.
- 7 STOP ■** – for stopping recording/play.
- 9 PAUSE II** – for interrupting recording/play.
- 18 CHANNEL/TRACK** – next ► or previous ◄ track.
- 20 ◀◀ ▶▶** – for winding the tape.

VCR 1 and VCR 2

- 1 STANDBY** – for switching the complete system to standby.
- 5 PLAY ►** – for starting play.
- 7 STOP ■** – for stopping recording/play.
- 9 PAUSE II** – for interrupting recording/play.
- 150-9 digit keys** – for selecting stations.
- 18 CHANNEL/TRACK** – next ► or previous ◄ station.
- 20 ◀◀ ▶▶** – for winding the tape.

CD and V-CD

- 1 STANDBY** – for switching the complete system to standby.
- 2 DISC +/-** (CD changer only) – for disc selection.
- 5 PLAY ►** – for starting play.
- 7 STOP ■** – for stopping recording/play/clearing a programme
- 8 DISPLAY** – for displaying the elapsed playing time and the remaining playing time during playback of a (V-) CD.
- 9 PAUSE II** – for interrupting recording/play.
- 150-9 digit keys** – for track selection.
- 18 CHANNEL/TRACK** – next ► or previous ◄ track.
- 20 ◀◀ ▶▶** – for searching up and down.

TV

- 1 STANDBY** – for switching the complete system to standby.
- 3 TXT** – for switching teletext on and off.
- 5 PLAY ►** – enlarge picture.
- 7 STOP ■** – hold picture.
- 8 DISPLAY** – for selecting on screen display.
- 9 CANCEL** – cancel teletext.
- 10 VOLUME TV** – for adjusting the volume.
- 150-9 digit keys** – for selecting preset stations.
- 16 -/-** – 1 or 2 digit entry.
- 18 CHANNEL/TRACK** – next ► or previous ◄ channel.
- 20 PAGE + /PAGE -** – next or previous teletext page.

DCC

- 1 STANDBY** – for switching the complete system to standby.
- 2 DECK A/DECK B** – for selecting deck A or B.
- 5 PLAY ►** – for starting play.
- 6 SIDE** – for selecting the tape travel direction.
- 7 STOP ■** – for stopping recording/play.
- 8 DISPLAY** – for displaying character information (e.g. title names etc.).
- 9 PAUSE II** – for interrupting recording/play.
- 150-9 digit keys** – for track selection.
- 18 CHANNEL/TRACK** – next ► or previous ◄ track.
- 20 ◀◀ ▶▶** – for winding the tape.

POWER STANDBY/OFF

- Press the POWER/STANDBY key to switch on the power.
 - The receiver will enter the standby mode and the standby indicator will light up.
- When the receiver is switched to active mode (as described below in the sections titled 'Wake-up from standby' and 'SOURCE SELECTION'), the respective indicators light up and the standby indicator is switched off.
- To switch the receiver off press the POWER/STANDBY key again.

STANDBY

Switching the FR 731 or your whole system to standby can only be done using the remote control.

Switching a single source (e.g. CD) to standby

- Select the source using the source keys on the remote control.
- Press the STANDBY key briefly.
 - The selected source will be switched to standby.

Switching the whole system to standby

- Keep the STANDBY key pressed for more than 1 second.
 - The whole system will be switched to standby.
- All light indicators will be switched off with the exception of the standby indicator on the receiver.

NOTE: If the whole system is switched to standby when a recording is active, the recording (or CD-dubbing) will be cancelled.

Wake-up from standby

- Press POWER/STANDBY on the receiver or select a source with your remote control.
 - The system will switch from standby to the operating mode.

SOUND CONTROL

Volume

- Adjust the sound volume with the VOLUME/TONE/BALANCE control.

Balance

- Press BALANCE.
 - BAL(ance) lights up.
- Adjust the stereo balance between the left and the right channels with the VOLUME/TONE/BALANCE control.

Treble

- Press TREBLE.
 - TRE(ble) lights up, together with the set level.
- Adjust the high tones with the VOLUME/TONE/BALANCE control; from -6 to 6.

Bass

- Press BASS.
 - BASS lights up, together with the set level.
- Adjust the bass tones with the VOLUME/TONE/BALANCE control; from -6 to 6.

WARNING: Extreme settings at high volume may damage your loudspeakers!

- Use the SURROUND CONTROL keys on the remote control to select the desired sound effect: **DOLBY PRO LOGIC** or **DOLBY 3-STEREO**. Press the OFF key on the remote control to switch the surround mode off.
- Press MUTE on the remote control if you want to decrease the volume by 20 dB.
- Press MONO/ST(ereo) on the remote control if you prefer mono reception.

Note: The MUTE function has no influence in TV/AUX mode.

SOURCE SELECTION

- When the receiver is switched on, it will switch directly to operating mode as soon as a source is selected.
 - The receiver and the selected source will become active.
 - The selected source will be indicated on the display.
- You can also switch both the source and the receiver to the active mode by simply pressing PLAY on CD or Deck or one of the tuner preset keys.

Source selection using the remote-control handset

- Press (**for more than 1 second**) the respective source key on the remote control.
 - The selected source and the receiver will become active.

SURROUND MODE

With the SURROUND key you can select 2 different surround modes: **DOLBY PRO LOGIC**, **DOLBY 3-STEREO**, **OFF**.

DOLBY PRO LOGIC: choose this setting to play back movies and music (especially Laser Discs, video cassettes and TV broadcasts with DOLBY SURROUND sound). Not only does Dolby Pro Logic surround you with sound, it also gives you a clear perception of the position and direction of the sound. Make sure your 'Speaker Positioning' is correct (see 'INSTALLATION').

With a great number of recently made movies, the sound track is specially encoded with the Dolby Surround mode carrying the **DOLBY STEREO** or **DOLBY SURROUND** trademark. The front speakers provide the dialogue and the normal stereo effect, while the rear speakers reproduce the surround signals. This position provides excellent results when watching television programs, video software, video discs or video tapes of stereo television broadcasts encoded with Dolby Surround

DOLBY 3-STEREO: Choose this setting to play back movies and music (especially Laser Discs, video cassettes and TV broadcasts with DOLBY SURROUND sound), when not using the rear speakers. You get a clear perception of the position and direction of the sound.

DOLBY 3-STEREO combines the front and rear signals so that you can enjoy a regenerated sound field which has comparatively more presence and a more expansive feeling from the three front channels (front left, front right and center speakers) than that of ordinary stereo regeneration.

OFF: On the remote control switches off the center and rear speakers for normal stereo operation.

Note: Dolby Pro Logic and Dolby 3-Stereo will not work properly if the signal passes through a graphic equalizer. Please refer to your equalizer user manual for guidance on switching off (or defeating) the equalizer.

When you select a SURROUND MODE the red indicator above the respective name lights up. The SURROUND MODE is switched off when you press the OFF key (on the remote control).

Each mode has programmed values for center-mode, center and rear levels and/or for rear channel time delay (as appropriate).

With the CENTER MODE and LEVEL keys on the remote control you can set other values. These values will then be kept in the memory until they are changed again.

The various values that can be adapted in the different surround modes are described next:

DOLBY PRO LOGIC:

- Use the SURROUND key to select Dolby Pro Logic.
- Press the CENTER MODE key on the remote control to select the required center channel mode:
 - NR**(normal) – If the center speaker has a low (20W) rating.
 - WI**(wide band) – If the center speaker has a high (same as left and right speakers) rating.
 - PH**(phantom) – If no center speaker is installed.
- Use the REAR LEVEL –, + keys to adjust the rear level (related to the front level).
 - **SUR**(round) lights up on the display.
 - The level will be indicated on the VOL indicator on the display: VOL • • • • •.
 - The delay time of the rear channel is fixed at 20 seconds.
- Use the CENTER LEVEL –, + keys to adjust the center level.
 - **CEN**(ter) lights up on the display.
 - The level will be indicated on the VOL indicator on the display: VOL • • • • •.

DOLBY 3-STEREO

- Use the SURROUND key to select Dolby 3-Stereo.
 - CENTER MODE:** in Dolby 3-Stereo mode you can only select **NR**(normal) and **WI**(wide band), see above.
 - REAR LEVEL:** adjusting the rear level is not possible in Dolby 3-Stereo mode.
 - CENTER LEVEL:** use the CENTER LEVEL –, + keys to adjust the center level as described above.

TEST TONE

Use the remote control TEST TONE function to obtain the correct balance between the levels of the left, right, center and rear speakers in the DOLBY PRO LOGIC and DOLBY 3-STEREO mode.

DOLBY PRO LOGIC:

- Press the TEST TONE key on your remote control.
- You will hear a test tone from the left (**F-L**), center (**CEN**), right (**F-R**) and rear (**SUR**) speakers in turn, in a repeating cycle.
- While sitting in the usual listening position, adjust the level of each speaker until they all sound equally loud. Use the VOLUME/TONE/BALANCE control to adjust the speaker levels.
 - The levels will be indicated on the VOL indicator on the display: VOL • • • • •.
- When you are satisfied with the levels, press the TEST TONE key on your remote control again to turn off the test tone.

DOLBY 3-STEREO

In Dolby 3-Stereo mode you can adjust only the levels of the left, right and center speakers.

GENERAL

- Select the waveband by pressing the FM or the AM button or press the TUNER button on the remote control.
- Tune to a radio station or select a preset number.
The correct procedure is described in the following chapters.
- While tuning, the audio signal will be muted to eliminate interfering background noises.
Once a station is found, the audio signal will be set to normal volume again.
- When STEREO appears on the display, you are receiving an FM stereo transmission.
- A disturbing noise, due to a weak FM stereo signal, can be suppressed by pressing MONO/ST(ereo) on the remote control.
- MONO will appear on the display and you will hear the FM program in mono.
A stereo station can be stored in mono or in stereo.

TUNING

AUTOMATIC TUNING

- Press TUNING/PRESET to switch off the CH(annel) indicator.
- Press TUNING/PRESET/STATION UP or DOWN for more than 1 second.
- AUTO appears on the display. The tuner will now search until a station of sufficient strength has been found. The display shows the tuned frequency.
- If the station found is not the desired one, simply repeat this operation.
- Weak stations are skipped during automatic tuning.
They can be tuned to manually.

MANUAL TUNING

Manual tuning is useful when you already know the frequency of the desired transmitter (e.g. from your program guide).

With the TUNING/PRESET/STATION UP/DOWN keys

- Press TUNING/PRESET to switch off the CH(annel) indicator.
- Briefly press TUNING/PRESET/STATION UP or DOWN until the right frequency has been reached.

BAND	USA/CANADA	EUROPE/AUSTRALIA
FM	100 KHz	50 KHz
AM	10 KHz	9 KHz

With the digit keys on the remote control

- Press the FR(equency) DIRECT key on the remote control.
-- -- -- -- -- will appear on the display.
- Enter the desired frequency with the digit keys on the remote control.
- As soon as you have entered the last digit, the tuner selects this frequency and the station becomes audible.
- Entry of the tuning frequency will automatically be interrupted if no key is pressed for 90 seconds, or if a key other than the digit keys is pressed. The tuner will return to the previous frequency.

PRESET STATIONS

You can store 30 preferred stations in the memory of the tuner. This enables you to find your favourite stations quickly and easily.

Programming of preset stations

- Tune either automatically or manually to the frequency to be stored (as described under TUNING)
- If the display shows no preset number, the frequency shown has not yet been stored in the memory.
- Press PROGRAM to enter the frequency in the memory.
- MEMO starts flashing for about 5 seconds and CH(annel) lights up.
- Select the preset number using TUNING/PRESET/STATION UP or DOWN *within the time* the MEMO indication flashes.
- Press PROGRAM again.
- The preset station has now been stored in the memory.
A stored frequency is erased from the memory by storing another frequency in its place.

Tuning to preset stations

- Press TUNING/PRESET to switch on the CH(annel) indicator.
- Select the desired preset number with TUNING/PRESET/STATION UP or DOWN.
- You will now receive the selected station and the display will show the preset number, the tuned frequency.

SLEEP

The sleep timer can be used to set a time period after which you wish your system to be switched to standby mode.

- Press the SLEEP key on the remote control.
- The display shows the indication SLEEP 10.
- This means that the system will be switched to standby after 10 minutes.
- Select the required sleep time by pressing SLEEP: 10, 20, 30, 60 or 90 minutes.

Notes:

- During an active sleep timer period, you can reset the time to SLEEP 10 again by pressing the SLEEP key.
- A sleep timer period will be cancelled when you switch your system to standby (using the STANDBY key on your remote control).

DUBBING FROM VCR2 TO VCR1

- Select VCR2 as program source to be recorded.
- Start recording on the VCR connected to VCR1.
- Start playback on the VCR connected to VCR2.
- The audio and video signals from VCR2 will be dubbed onto the tape in VCR1.

When dubbing from VCR2 to VCR1, you can replace the audio signal from VCR2 with the signal from an audio source, e.g. a CD player.

- First select VCR2 as program source to be recorded.
- Then select the required audio source.
- Start recording on the VCR connected to VCR1.
- Start playing back on the audio source and on the VCR connected to VCR2.
- You can now watch the picture from VCR2 on your TV and listen to the sound from the audio source while recording.

TECHNICAL SPECIFICATIONS**AMPLIFIER SECTION**

- Output power: (left/right)
.....IEC (D<0.7%) 63 Hz - 12.5 kHz 2 x 55 W (8 Ω)
- Surround mode:
front2 x 35 W
rear15 W
center35 W
- Music Power (1 kHz, 8 Ω)2 x 135 W
- Total harmonic distortion: $\leq 0.5\%$ at 1 kHz
- Intermodulation distortion: $\leq 0.5\%$
- Power bandwidth:10 - 48,000 Hz (at -3dB)
- Frequency response:
linear inputs20 - 25,000 Hz, + 1 dB
- Signal-to-Noise Ratio:
linear ≥ 90 dB
- Stereo separation: ≥ 45 dB
- Crosstalk ≥ 80 dB
- Damping factor ≥ 40 at 8 Ω
- Bass/Treble control+/- 10 dB at 100 Hz/10 kHz

INPUT SENSITIVITY

Linear inputs:200 mV at 22 k Ω (rated output)

OUTPUTS

Recording:200 mV at 2.5 k Ω
Headphones:8 - 1,000 Ω
Loudspeakers:6-16 Ω

POWER SUPPLY

Mains voltage:according to typeplate
Power consumption:150 W
Mains outlet:100 W max.

TUNER SECTION

- Wave range FM87.5 - 108 MHz
- Sensitivity15.9 dB
- Adjacent Channel Selectivity55 dB (400 kHz)
- Total harmonic distortion (mono/stereo):0.3%/0.5%
- Frequency response30 - 15,000 Hz +/- 1.5 dB
- S/N ratio: mono/stereo70/65 dB
- Channel separation40 dB at 1 kHz
- IF suppression70 dB
- Image rejection45 dB
- Wave range AM530 - 1,710 kHz
- Sensitivity 26 dB S/N1500 μ V/m

REMOTE CONTROL SYSTEM

- + RC-5 BUS2x

CABINET

- Dimensions (w x h x d)435 x 125 x 350 mm approx
- Weight8 kg approx

ACCESSORIES

- Remote control unit1x
- Battery AAA/LR03/UM42x
- AM Loop Antenna1x
- FM T-bar Antenna1x

Subject to modification

MAINTENANCE

- Do not leave the unit in direct sunlight or other places where high temperatures can occur for any length of time, such as in the vicinity of a heating apparatus.
- Do not expose the equipment to humidity or rain.
- A chamois leather cloth, slightly moistened with water is sufficient for cleaning the cabinet.
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

If a fault occurs, run through the points listed below before taking your receiver for repair.

If the fault persists, attempt to solve it by **switching the receiver off and on again**. If this fails to resolve the situation, consult your dealer. **Under no circumstances should you repair the receiver yourself as this will invalidate the guarantee!**

PROBLEM

- POSSIBLE CAUSE
- REMEDY

NO POWER

- The mains lead is disconnected.
- Connect the lead securely.
- Poor connection at the wall socket or the wall socket is inactive.
- Check the wall socket using a lamp or another appliance.

NO SOUND FROM THE FRONT SPEAKERS

- Speaker cables are disconnected.
- Check the speaker connections.
- Volume is too low.
- Adjust the volume.
- Front speakers are not switched on.
- Press the SPEAKERS ON/OFF button to switch on the front speakers.

NO SOUND FROM THE REAR SPEAKERS

- Surround mode is switched off.
- Select a surround mode.
- Volume and rear level are too low.
- Adjust the volume.
- A monaural source is used.
- Select a stereo or surround source.
- Dolby 3-Stereo mode is selected.
- Switch off Dolby 3-Stereo mode.

NO SOUND FROM THE CENTER SPEAKER

- Dolby Pro Logic or Dolby 3-Stereo mode is not selected.
- Select Dolby Pro Logic or Dolby 3-Stereo mode.
- Volume and center level are too low.
- Adjust the volume and center level.
- The center mode is set to phantom mode.
- Set the center mode to normal or wide.

NO SOUND IS HEARD, EVEN WHEN A SOURCE SELECTION BUTTON IS PRESSED

- The MUTE button is pressed.
- Press MUTE again to cancel the MUTE function.
- Volume is too low.
- Adjust the volume.
- Connections between the components are incorrect.
- Make connections correctly.

THE REMOTE CONTROL UNIT DOES NOT OPERATE

- No batteries loaded or flat batteries.
- Replace the batteries.
- The IR sensor is obstructed.
- Remove the obstacle.

STATIONS CANNOT BE RECEIVED

- No antenna connected.
- Connect an antenna.
- The desired station frequency is not tuned in.
- Tune in the desired station frequency.

PRESET STATIONS CANNOT BE RECEIVED

- An incorrect station frequency has been memorized.
- Memorize the correct station frequency.
- The memorized stations are cleared.
- Memorize the stations again.

POOR FM RECEPTION

- No antenna connected.
- Connect an antenna.
- The antenna is not positioned for the best reception.
- Change the position of the antenna.

CONTINUOUS HISSING NOISE DURING FM RECEPTION, ESPECIALLY WHEN A STEREO BROADCAST IS RECEIVED

- Weak signal.
- Change the position of the antenna.
- Install an outdoor antenna. Use an antenna with 3, 4 or 5 elements if the broadcast station is far away.

CONTINUOUS OR INTERMITTENT HISSING NOISE DURING AM RECEPTION, ESPECIALLY AT NIGHT

- Noise is caused by motors, fluorescent lamps or lightning, etc.
- Keep the receiver away from noise sources.
- Install an outdoor AM antenna.

A HUM CAN BE HEARD DURING AM RECEPTION

- The mains lead may be too close to the AM loop antenna or the antenna wire.
- Position the mains lead away from the antenna wire and the AM loop antenna.
- Adjust the position of the AM loop antenna.

OTHER SYSTEM COMPONENTS DO NOT REACT TO REMOTE CONTROL COMMANDS

- RC-5 connections are not made properly.
- Make proper RC-5 connections.

GUARANTEE FOR AUSTRALIA

The benefits given to the purchaser by this warranty are in addition to all other rights and remedies, which, under the Trade Practices Act or other Commonwealth or State law, the purchaser or owner has in respect of the product.

The Philips product carries the following warranties:

- C-series HiFi-systems 12 months.
- Compact Disc Players: 12 months.
- Home Audio Systems: 6 months.
- Clock radios, portable radios, cassette recorders, cassette players and radio recorders: 90 days.

Any defect in materials or workmanship occurring within the specified period from the date of delivery, will be rectified free of charge by the retailer from whom this product was purchased.

Note: Please retain your purchase docket to assist prompt service.

Conditions of this warranty

1. All claims for warranty service must be made to the retailer from whom this product was purchased. All transport charges incurred in connection with warranty service or replacement will be paid by the purchaser.
2. These warranties do not cover batteries and extend only to defects in materials or workmanship occurring under normal use of the product where operated in accordance with our instructions.

Philips
Consumer Products Division
Technology Park
Figtree Drive, Australia Centre
Homebush 2140
New South Wales

GUARANTEE FOR NEW ZEALAND

Thank-you for purchasing this quality Philips product. Philips New Zealand Ltd guarantees this product against defective components and faulty workmanship for a period of 12 months. Any defect in materials or workmanship occurring within 12 months from the date of purchase subject to the following conditions will be rectified free of charge by the retailer from whom this product was purchased.

Conditions

1. The product must have been purchased in New Zealand. As proof of purchase, retain the original sales docket indicating the date of purchase.
2. The guarantee applies only to faults caused by defective components, or faulty workmanship on the part of the manufacturer.
3. The guarantee does not cover failures caused by misuse, neglect, normal wear and tear, accidental breakage, use on the incorrect voltage, use contrary to operating instructions, or unauthorised modification to the product or repair by an unauthorised technician.
4. Reasonable evidence (in the form of a sales docket) must be supplied to indicate that the product was purchased no more than 12 months prior to the date of your claim.
5. In the event of a failure, Philips shall be under no liability for any injury, or any loss or damage caused to property or products other than the product under guarantee.

This guarantee does not prejudice your rights under common law and statute, and is in addition to the normal responsibilities of the retailer and Philips.

How to claim

Should your Philips product fail within the guarantee period, please return it to the retailer from whom it was purchased. In most cases the retailer will be able to satisfactorily repair or replace the product.

However, should the retailer not be able to conclude the matter satisfactorily, or if you have other difficulties claiming under this guarantee, please contact.

The Guarantee Controller
Philips New Zealand Ltd.

✉ P.O. Box 41.021

Auckland

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